PETITION FEE
37 CFR 1.17(f), (g) & (h)
TRANSMITTAL
(Fees are subject to annual revision)

Send completed form to: Commissioner for Patents
P.O. Box 1450, Alexandria, VA 22313-1450

Application Number	10/807,857
Filing Date	March 24, 2004
First Named Inventor	Nakamura, Takashi
Art Unit	2184
Examiner Name	Unassigned
Attorney Docket Number	16869B-103700US

Enclosed is a petition filed under 37 CFR __§1.102(d)__ that requires a processing fee (37 CFR 1.17(f), (g), or (h)). Payment of $_130.00_____ is enclosed.

This form should be included with the above-mentioned petition and faxed or mailed to the Office using the appropriate Mail Stop (e.g., Mail Stop Petition), if applicable. *For transmittal of processing fees under 37 CFR 1.17(i), see or PTO/SB/17i.*

Payment of Fees (small entity amounts are NOT available for the petition fees)

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Petition Fees under 37 CFR 1.17(f):   Fee $400   Fee Code 1462
For petitions filed under:
§ 1.53(e) - to accord a filing date.
§ 1.57(a) - to accord a filing date.
§ 1.182 - for decision on a question not specifically provided for.
§ 1.183 - to suspend the rules.
§ 1.378(e) - for reconsideration of decision on petition refusing to accept delayed payment of maintenance fee in an expired patent.
§ 1.741(b) - to accord a filing date to an application under § 1.740 for extension of a patent term.

Petition Fees under 37 CFR 1.17(g):   Fee $200   Fee Code 1463
For petitions filed under:
§ 1.12 - for access to an assignment record.
§ 1.14 - for access to an application.
§ 1.47 - for filing by other than all the inventors or a person not the inventor.
§ 1.59 - for expungement of information.
§ 1.103(a) - to suspend action in an application.
§ 1.136(b) - for review of a request for extension of time when the provisions of section 1.136(a) are not available.
§ 1.295 - for review of refusal to publish a statutory invention registration.
§ 1.296 - to withdraw a request for publication of a statutory invention registration filed on or after the date the notice of intent to publish issued.
§ 1.377 - for review of decision refusing to accept and record payment of a maintenance fee filed prior to expiration of a patent.
§ 1.550(c) - for patent owner requests for extension of time in ex parte reexamination proceedings.
§ 1.956 - for patent owner requests for extension of time in inter partes reexamination proceedings.
§ 5.12 - for expedited handling of a foreign filing license.
§ 5.15 - for changing the scope of a license.
§ 5.25 - for retroactive license.

Petition Fees under 37 CFR 1.17(h):   Fee $130   Fee Code 1464
For petitions filed under:
§ 1.19(g) - to request documents in a form other than that provided in this part.
§ 1.84 - for accepting color drawings or photographs.
§ 1.91 - for entry of a model or exhibit.
✓ § 1.102(d) - to make an application special.
§ 1.138(c) - to expressly abandon an application to avoid publication.
§ 1.313 - to withdraw an application from issue.
§ 1.314 - to defer issuance of a patent.

_____ Signature	__October 31, 2005__ Date
Chun-Pok Leung Typed or printed name	__41,405__ Registration No., if applicable

60623874 v1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

TAKASHI NAKAMURA et al.

Application No.: 10/807,857

Filed: August 24, 2004

For: REASONABLE CLOCK
ADJUSTMENT FOR STORAGE
SYSTEM

Customer No.: 20350

Examiner: Unassigned

Technology Center/Art Unit: 2184

Confirmation No.: 5490

**PETITION TO MAKE SPECIAL FOR
NEW APPLICATION UNDER M.P.E.P.
§ 708.02, VIII & 37 C.F.R. § 1.102(d)**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is a petition to make special the above-identified application under MPEP § 708.02, VIII & 37 C.F.R. § 1.102(d). The application has not received any examination by an Examiner.

(a) The Commissioner is authorized to charge the petition fee of $130 under 37 C.F.R. § 1.17(i) and any other fees associated with this paper to Deposit Account 20-1430.

(b) All the claims are believed to be directed to a single invention. If the Office determines that all the claims presented are not obviously directed to a single invention, then Applicants will make an election without traverse as a prerequisite to the grant of special status.

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(c)   Pre-examination searches were made of U.S. issued patents, including a classification search and a key word search. The classification search was conducted on or around October 5, 2005 covering Class 386 (subclasses 111 and 124), Class 707 (subclasses 4, 9, 10, 100, 102, and 200-205), Class 711 (subclasses 100, 111-114, 136, 147, 156, and 159-167), and Class 713 (subclasses 164-167), by a professional search firm, Mattingly, Stanger, Malur & Brundidge, P.C. The key word search was performed on the USPTO full-text database including published U.S. patent applications. A search for foreign art was also conducted using the European Patent Office's ESPACENET database and Japanese patent database.

(d)   The following references, copies of which are attached herewith, are deemed most closely related to the subject matter encompassed by the claims:

(1)   U.S. Patent No. 5,689,699;

(2)   U.S. Patent No. 6,574,717 B1;

(3)   U.S. Patent No. 6,915,398 B2;

(4)   U.S. Patent Publication No. 2005/0055518 A1;

(5)   U.S. Patent Publication No. 2005/0097260 A1; and

(6)   U.S. Patent Publication No. 2005/0125411 A1.

(e)   Set forth below is a detailed discussion of references which points out with particularity how the claimed subject matter is distinguishable over the references.

A.   Claimed Embodiments of the Present Invention

The claimed embodiments relate to clock adjustment for storage system and, more specifically, to a method and system for providing clock management and adjustment in connection with content retention in a storage system.

Independent claim 8 recites a storage system coupled to a host. The storage system comprises at least one data unit; a clock configured to provide a current time, wherein the current time is used to be compared with a retention time of the at least one data unit to prevent the host from overwriting data stored in the at least one data unit before the retention

time; a memory configured to store clock management information; and a storage access program. The storage access program is configured to receive a proposed new time for the clock; determine whether a difference between the current time and the proposed new time falls within a specific range based on the clock management information; and adjust the current time of the clock to the proposed new time if it is determined that the difference falls within the specific range.

Independent claim 20 recites a method for managing clock adjustment in a storage system, the storage system having a clock providing a current time for managing a retention time of at least one data unit. The method comprises receiving a proposed new time for the clock; determining whether a difference between the current time and the proposed new time falls within a specific range; and adjusting the current time of the clock to the proposed new time if it is determined that the difference falls within the specific range.

One of the benefits that may be derived is that it can be used to manage clock adjustment to ensure that clock adjustment is restricted to a reasonable time range, wherein such restriction minimizes illegal clock adjustments and thus ensures the integrity of content retention.

B.   Discussion of the References

1.   U.S. Patent No. 5,689,699

The patent to Howell et al., US 5689699, discloses a method and a system for dynamically verifying authorization in a retention management scheme. The method of that invention deletes an object in a data processing system. The object is provided with an expiration time by a security subject. The method determines when the expiration time has occurred. When the expiration time has occurred, then it is determined if the security subject object is deleted. Otherwise, the object is maintained on the data processing system. The data processing system deletes an object having an expiration time provided by a security subject. The data processing system includes a device for determining when the expiration time has occurred. There is also a device for determining if the security subject has the authority to delete the object. The device for determining if the security subject has the authority to delete the object is responsive to the device for determining if the expiration time has occurred. There is also a device for deleting the object, which device for deleting is

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responsive to the device for determining if the security subject has authority to delete the object. See, e.g., column 3, lines 3-35.

Howell et al. is directed to deleting an object at the expiration time if the security subject has the authority to do so. It does not relate to adjusting the current time of the clock based on a difference between the current time and a proposed new time. More specifically, Howell et al. does not teach, in a storage system having a clock to provide a current time to manage a retention time, determining whether a difference between the current time and the proposed new time falls within a specific range, and adjusting the current time of the clock to the proposed new time if the difference falls within the specific range, as recited in independent claims 8 and 20.

2.   U.S. Patent No. 6,574,717 B1

The patent to Ngai et al., US 6574717, discloses techniques for managing a resource within a computer system. In a description of conventional elements, the resource is reusable by a plurality of entities, including establishing a minimum period of time for retaining an amount of the resource after completion of use of the resource by an entity. A first amount of resource is allocated to a first entity. After allocating the first amount to the first entity, the first amount is prevented from being allocated to a second entity before the minimum period of time expires after the first entity completes use of the first resource. A first entity makes changes in a computer system, durably storing in a first storage space first information on how to remove the changes. After the first entity has terminated, the first information is retained in the first storage space for a time based on a specified minimum amount of time. See, e.g., column 5, line 36 to column 6, line 22.

Ngai et al. is directed to ensuring that a resource that has been allocated to one entity is not reallocated to another entity before a minimum period of time expires. It does not relate to adjusting the current time of the clock based on a difference between the current time and a proposed new time. More specifically, Ngai et al. does not teach, in a storage system having a clock to provide a current time to manage a retention time, determining whether a difference between the current time and the proposed new time falls within a specific range, and adjusting the current time of the clock to the proposed new time if the difference falls within the specific range, as recited in independent claims 8 and 20.

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3.   U.S. Patent No. 6,915,398 B2

        The patent to Matsubara et al., US 6915398, discloses a technique of reproducing digital data only during a term that allows reproduction. The technique includes detecting fraudulent modification of the current time in a reproduction apparatus including a circuit that detects the current time to strictly monitor reproduction of digital data. The recorded date in the recording medium is overwritten with the current date by the overwrite circuit. If the time limit allowing data output has elapsed, and the current date that will be detected by the detection circuit of the data reader has been modified improperly, the data reader determines that data output is not allowed. Until the time limit allowing data output expires, the proper current date is detected and the proper current data is recorded in the recorded date region of the recording medium. After the time limit has elapsed, if the user improperly modifies the current date, that will be detected by the detection circuit to attempt improper data output. Since the current data is before the date when the data has been recorded (the date overwritten by the proper current date), the determination circuit determines that data output is not allowed. Further, the determination circuit includes a circuit that determines that output of the data recorded in the recording medium is allowed if the current date is after the recorded date and before the time limit. When the current date detected by the detection circuit of the data reader is not improperly modified and the current date is within the time limit where data output is allowed, determination is made that the data recorded in the recording medium can be output. See, e.g., column 4, lines 5-47; and column 6, line 49 to column 7, line 64.

        Matsubara et al. is directed to determining whether reproduction of data recorded in the memory card is allowed or not, based on a comparison of the current date detected by the real time clock and the recorded date and reproduction time limit of the data. It does not relate to adjusting the current time of the clock based on a difference between the current time and a proposed new time. More specifically, Matsubara et al. does not teach, in a storage system having a clock to provide a current time to manage a retention time, determining whether a difference between the current time and the proposed new time falls within a specific range, and adjusting the current time of the clock to the proposed new time if the difference falls within the specific range, as recited in independent claims 8 and 20.

4.   U.S. Patent Publication No. 2005/0055518 A1

The published patent application to Hochberg et al., US 20050055518, discloses a method, system, and program for storing objects. An object to store and a storage policy associated with the object are received, where the storage policy specifies a retention period. Object information is generated for the received object indicating a storage policy including a retention period. A determination is made as to whether the storage policy comprises an event based retention policy, where for the event based retention policy, the retention period start commences in response to receiving an event signal, and where the object having an event based retention policy does not expire until after the event signal is received and the difference between the current time and the retention period start exceeds the retention period. Status information is set to indicate that the event signal has not been received in response to determining that the storage policy comprises one event based retention policy. See, e.g., paragraphs [0010], and [0035]-[0039].

Hochberg et al. is directed to allowing a modification request with respect to a stored object to proceed in response to determining that the stored object has expired. It does not relate to adjusting the current time of the clock based on a difference between the current time and a proposed new time. More specifically, Hochberg et al. does not teach, in a storage system having a clock to provide a current time to manage a retention time, determining whether a difference between the current time and the proposed new time falls within a specific range, and adjusting the current time of the clock to the proposed new time if the difference falls within the specific range, as recited in independent claims 8 and 20.

5.   U.S. Patent Publication No. 2005/0097260 A1

The published patent application to McGovern et al., US 20050097260, discloses a system and a method for a storage system that specifies a retention date within a data set that is locked against deletion or modification within a WORM storage implementation. The retention date/time is calculated by querying the file's last modified time prior to comment, adding the retention period to this value and thereby deriving a retention date after which the file can be released from WORM. The computer retention date is stored in the file's last access time property attribute field, or another metadata field that remains permanently associated with the file and that in being used for the retention date,

does not interfere with file management in a WORM state. A recent trusted clock time can be stored in system memory and compared to the time in each file to locate the expired ones. The retention date of each file can be read and then a current clock time can be retrieved and compared. Deletion can occur on each file in turn after expiration is confirmed, or all expired files can be identified by the scan and deleted by the application using appropriate file management scripts. See, e.g., paragraphs [0022], [0065], [0122], [0123], [0132], [0141], and [0144].

McGovern et al. discloses that the retention date is locked against modification, and that an extension of a retention period can be incorporated by adding the new retention period to the existing one to derive a new, later retention date. It does not relate to adjusting the current time of the clock based on a difference between the current time and a proposed new time. More specifically, McGovern et al. does not teach, in a storage system having a clock to provide a current time to manage a retention time, determining whether a difference between the current time and the proposed new time falls within a specific range, and adjusting the current time of the clock to the proposed new time if the difference falls within the specific range, as recited in independent claims 8 and 20.

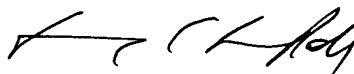6.   U.S. Patent Publication No. 2005/0125411 A1

The published patent application to Kilian et al., US 20050125411, discloses a method and a system for processing data in a computer system comprising at least one host and at least one storage system. The method comprises acts of: (A) receiving a request, from the host, to delete a unit of data stored on the storage system; (B) determining whether a previously defined retention period for the unit of data has expired; and (C) when it is determined in the act (B) that the retention period for the unit of data has not expired, denying the request to delete the unit of data. One embodiment is directed towards a storage system for use in a computer system comprising at least one host and the storage system. The storage system comprises: at least one storage device to store data received from the at least one host; and at least one controller. The at least one controller receives a request, from the host, to delete a unit of data stored on the storage system; determines whether a previously defined retention period for the unit has expired; and when it is determined that the retention period for the unit of data has not expired, denies the request to delete the unit of data. See, e.g., paragraphs [0007] and [0018]-[0022].

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Kilian et al. discloses denying a request to delete data if the retention period associated with the data has not expired. It does not relate to adjusting the current time of the clock based on a difference between the current time and a proposed new time. More specifically, Kilian et al. does not teach, in a storage system having a clock to provide a current time to manage a retention time, determining whether a difference between the current time and the proposed new time falls within a specific range, and adjusting the current time of the clock to the proposed new time if the difference falls within the specific range, as recited in independent claims 8 and 20.

(f) In view of this petition, the Examiner is respectfully requested to issue a first Office Action at an early date.

Respectfully submitted,

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